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Dry Areas in History of Southeast Asia

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1. Culture and Civilization

Area and Culture A concept of *culture* and *civilization* are clearly distinguished herein. *The Concept of Culture* held by traditional anthropologists like *E.B. Tylor* is regarded as *Culture* in a wide sense in this paper. It is here divided into 2 concepts, as culture in narrow sense and civilization. Culture in a narrow sense was *a complex of way of life inherited by successive generations and born from the confluence between human activity and natural environment*. Therefore a cultural circle should be delimited in a natural environmental zone. Generally, it is difficult to transfer any factor of a culture into different natural environment. Thus the Concept of area means *a space having a cultural particularity in a certain ecological boundary*.

World and Civilization There are, nevertheless, *some factors of culture though originating in a certain natural environment, have the special capacity of transferability to a different environment*. We call a complex of such cultural factors as *civilization* in a narrow sense. *Civilization* in this sense have been well developed in a urban regions as artificial spaces independent from their own environment. *A world as used by historians generally means the extent of single civilization, which may include several types of ecological environments*.

Civilization, Culture and Region Southeast Asia is an *area* represented by a common way of life such as paddy and fish, wooden piled house, *sarung* and spiritual religion fully adapted to the ecological environment of hot and humid climate in low latitudes. Throughout its history, Southeast Asia has produced tropical goods like forest products for outer worlds. At the same time, Southeast Asia as a whole should be regarded as a great emporium between two worlds linked by the sea, and a point of contact between culture and civilization. Culture and civilizations meet together in Southeast Asia, as a result of which, many *regions* have been based on the complex between cultural and civilization factors in given geographical and historical situations. Civilization is a systematic structure composed of several factors of a culture in a wide sense which has faculties to surpass the ecological environmental border and to spread from an ecological circle to another circle speedily such as world religions. Urbanity is perfectly artificial one independent from all of ecological environment surrounding it. In the sense, urbanity were more easily established in areas surrounded by antagonistic environment to human being such as Dry zones in West and Central Asia than Wet zones in East and Southeast Asia. *Civilization* has been born in such a urbanity as isolated shelters from environment.

2. Geo-Historical individuality of Southeast Asia

Tropical Islands The equator crosses the land in three points in globe, namely the *Amazon River Area*, the *Congo River Area* and Southeast Asia. Of these only Southeast Asia is a maritime area. Islands in Southeast Asia are so many and so big¹ The index number of Sea coastal line (area / length of Sea coastal line) shows 5 in Southeast Asia (including Mainland Southeast Asia) meaning 1 km of Coastal line cover only 5 km² of land while 500 in China, 20 even in Japan. The long coastal line supply a lot of rainwater from sea to inland to be one of the most humid area in the globe². High temperature and humidity make Southeast Asia the paradise of vegetation. At the same time, the long coastal line gives good access to interworld networks. Southeast Asia is the center of tropical products which outer worlds request.

Sea of the worlds There are three oceans in the globe to define boundaries of so-called each worlds. The navigators did not have any sea channels between Pacific and Atlantic, Indian and Atlantic Oceans before the 16th century. Only between Indian and Pacific Oceans³ has some channels in Southeast Asia such as *Melaka (Malacca)*, *Sunda* and *Lombok* channels. Southeast Asian seas can preside over civilization streams as a geographical interworld gateway.

Outward Looking Seas There is very small population in Southeast Asia comparing their long seacoast lines. Generally, though tropical humid climate provide the flora with very suitable environment but it supplies so severe condition for human to live as tropical disease problem, shortage of food material and so on. Therefore index of population / length of coast shows 570 in China, 40 in Southeast Asia.

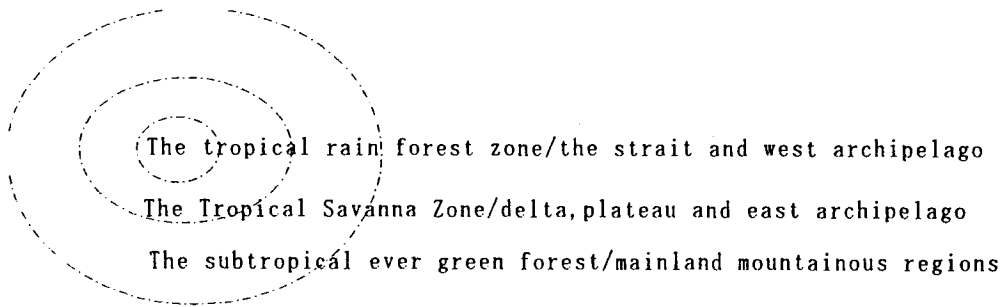
Hla Myint, a famous Burmese Economist, categorized under-developing states in Asia into 2 groups as inward looking and outward looking countries in 1960's (*Myint*, 1971). Inward looking countries such as India and China are characterized by big population and small natural resources to export who have to control all of their economic activity to distribute their limited natural resource among population through central organization of state. As a result, they should establish their statecraft to be self-sufficient and inward looking. Outward looking countries have small territories, small population and big exporting crop production such as Southeast Asian states but North Vietnam and Java. They take advantage of development of outer worlds' markets for their

¹for example, *Borneo* of 750,000 km², the 3rd biggest island in the globe, *Sumatra* of 520,000 km², the 6th, *Sulawesi*, the 9th, *Java*, the 11th, *Luzon*, the 15th and *Mindanao*, the 17th.

²*Sittwe* in Lower Burma has 4649mm of precipitation, the highest in the globe.

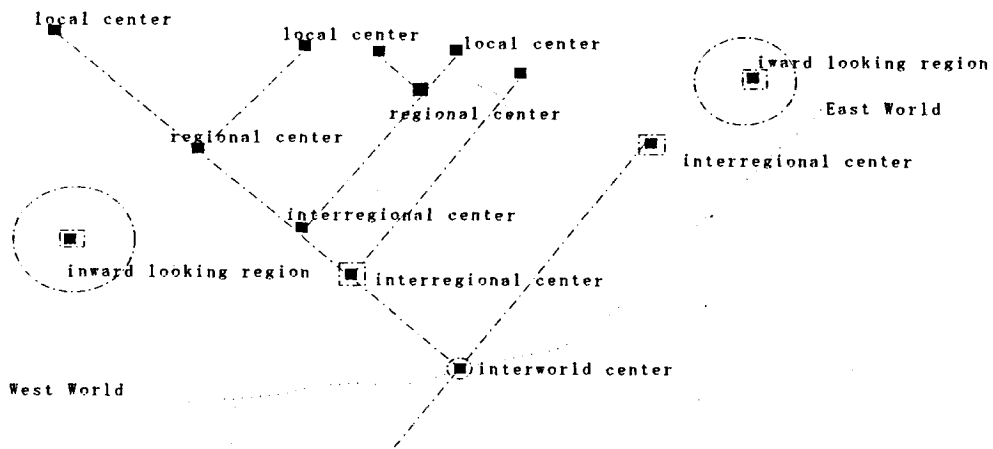
³ more exactly, the South China Sea as an attached sea to Pacific Ocean

export because of shortage of market and capital in their domestic region. Though his theory was in 60's, but his ecological perception suggests that small population and rich natural resources of Southeast Asia persuaded the regions to be outward looking polity through history.



Segmental and dendritic structure of network all of regions in Southeast Asia with so many varieties born through history and geography has been placed in dendritic networks as follows.

- (1) Interworld center: the emporium between west and east worlds and also the rendezvous for interregional centers and worlds markets
- (2) Interregional center: distributing and collecting center between interworld center and historical regions.
- (3) regional center: distributing and collecting center of historical region for local unit.
- (4) local center: distributing and collecting center of local unit.
- (5) inward looking grain agricultural regions isolated from maritime activities.



Before the 10th century, influence of the interworld centers was eminent in the area of Southeast Asia such as *Funan* and *Srivijaya-Sailendra*. In the Age of Commerce from the 15th to 17th century, interregional centers developed to interworld center like *Ayuthaya* and *Batavia*. In the later 19th century, the dendritic structure was performed systematically under Western Colonialism such as *Singapore* as the interworld center, *Rangoon*, *Bangkok*, *Saigon*, *Batavia* as interregional centers connecting with the regional centers such as *Mandale*, *Chieng Mai*, *Mytho* and *Bandong*. Since independence, most of the interregional centers became the capitals of new nation-states trying to contact to world market directly. After development of ASEAN network in 1980's, a new axis of Bangkok, Singapore and Jakarta is renewing dendritic network of Southeast Asia.

Balance between maritime and terrestrial network Generally, Savanna and Mountainous regions in Southeast Asia are self-sufficient space based on their original cultural values so that they did not need outer world goods for their life. It would be so difficult for Interworld center in Maritime circle to collect steadily their products as commodity in international market concept. Maritime circle collected forest goods from them through 5 ways in each historical stage as follows; (1)tribute (2)monopolistic purchase (3) delivery (4)free trade. But in every stage, interworld center should supply outer world civilization to inland cultural regions such as world religion to electrical appliance. Seas in Southeast Asia transferred civilization from outer worlds and lands accumulated it and mixed with local culture to form new regional culture.

3. Historical Status of Dry Zone in Southeast Asia

Dry zone and Padi-agriculture Agriculture is a typical factor of culture in a narrow sense. Agricultural base of Southeast Asia is mainly paddy cropping which requests more than 1800mm within 6 months at shortest. But except for several parts in a tropical rain forest zone, most of monsoon Southeast Asia's rainfall situation cannot fill the condition for rainfed padi-agriculture. In the sense, padi agriculture in Southeast Asia should started at the basins in a mountainous area or the lower, swampy spots in a rivermouth area where has a lot of water catchment as archaeological sites of *Dong Son* and *Sa Huynh* show.

The water condition of Dry zone in Southeast Asia is not enough for padi-agriculture such as *Mandale*, 843.3mm, *Surin*, 1293mm, *Siem Riap*, 1335mm. Furthermore, most of the Dry Zone in Southeast Asia have their little water catchment or are higher than river water level. Under the self-sufficient agricultural stage, the most of dry zone should be cultivated as millet and dry rice field such as in Burmese dry zone without any irrigation system, or quite unstable rainfed padi-agriculture such as *Isaan* and Cambodia plateau. Dry zone should be regarded as a periphery of

padi-agriculture in Southeast Asia.

As mentioned-above, Southeast Asia was a treasure house of tropical or sub-tropical forest goods for outer-world. However, the places of production of those were so limited in Archipelago and mountainous mainland Southeast Asia because forestry condition in Dry Zone is so simple and poor under the Savanna climate. Agriculture of Dry zone has played little role for exporting through history. Based on the population on self-sufficient agriculture and no resources to export, primarily Dry zone should be apt to be inward-looking area in the sense.

Dry zone and land transportation Dry zone situated between the maritime area linking with international network and mountainous area producing for international commercial goods so that Dry zone in Southeast Asia could be regarded as emporium zones in land transportation network. Any maritime powers could not collect international commodity not through Dry Zone in ancient time. Such a contradict characters between inward looking regions and open flat field made history of Dry zone so fluctuated totally based on economic conjuncture in outer- world and technological stage of transportation.

4.Early Cities in Dry zone

Station-city polity Generally Early Cities⁴ could be divided into 3 categories.

- (1) center of domestic administration usually situates at a core of a certain ecological and cultural circles. Most cities in a inward looking region were developed as this type such as feudal cities of inland Europe and local administrative centers in inland China whose main function is to collect agricultural surplus as tax or tribute and labor as corvee or conscription.
- (2) emporium city between different cultural situates at joint point of network route such as *caravan* cities in West Asia and port cities in Southeast Asia.
- (3) religious city as a center of supraregional religion, which underdeveloped in Southeast Asia..

As mentioned -above, Dry zone in Southeast Asia is not good field for padi-agriculture to produce surplus, and population density was relatively lower under the natural condition so that category (2) preceded to develop in Dry Zone as a regional polity. The characters of Dry zone regional polity namely emporium cities were as follows;

⁴Though concept of early city in history of Southeast Asia has been discussed so long time, but it could be brought to a temporally definition in this paper that (1) a settlement of non-agricultural population, but of which boundary with surrounding villages was not so definitively. (2) local society with its own administrative institute.

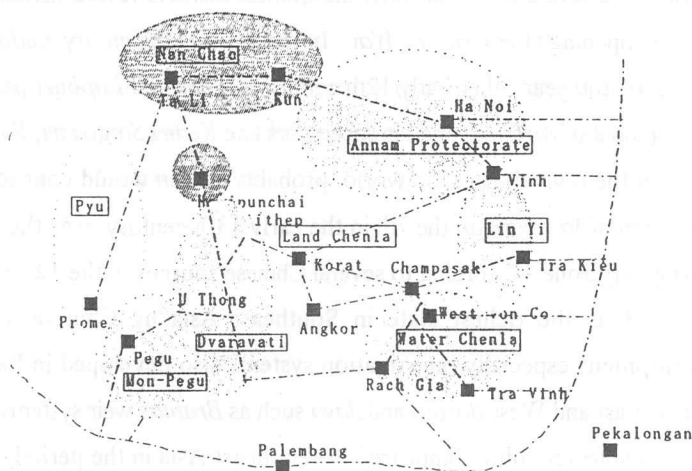
(1) Because of the shortage of intra-regional market, the establishment of early cities in Dry zone totally depended on the economic conjuncture of outer world market. Moreover, generally, there is not so remarkable topographical boundary in Dry zone that domain of a political power was so elastic in size with the change of times as *Mandala* theory mentioned. Therefore, vicissitudes of regional polities in Dry Zone were fluctuated more drastically than coastal and basin cities.

(2) Because of no geographical speciality in plateau, route of network had been changed so easily. Cities tried to maintain their network by political or military way than economic rationality so that regional polities in Dry zone were apt to be centralized on administration and military.

(3) To centralize the network from mountainous regions, rulers of cities were obliged to mediate outer civilization to them. Therefore, cities built themselves as great symbol of outer civilization.

Urban Agriculture in Dry Zone in Southeast Asia As above-mentioned, Cities in Dry zone should be requested so many concentrated population for their military and political needs to control dry zone networks. But natural agricultural situation of Dry Zone could not permit to keep such a stable population in city. According to the research conclusion on *Don Daeng* village in Northeast Thailand, fluctuation of agricultural production changed from 20 % to 100% in every year under the rainfed condition. Therefore, agriculture could not support cities by its unstable surplus. In the case of coastal cities, they could resolve the problems by import rice from near rice bowl such as Javanese basins by sea route. But, Cities in Dry Zone could not find such a agricultural base near them, as a result of which, Cities in Dry Zone should choose two ways, expanding their territories and built artificial agriculture. Base on outskirts fields with irrigation system to supply water in dry season for the second crop and even for wet season for transplanting time, the cities could gain enough food steadily to maintain political and religious apparatus. Cities should establish systematized irrigation infrastructure not for peasant but urban people. Baray of Khmer domain could be regarded as such a case as this.

Outward looking to inward looking The development of cities in Dry zone depended on the economic conjuncture in the outer world market especially Chinese Market. In the 8th century, connected with flourish of Tang dynasty's market, the network of cities in Dry zone was completed as map 3. As shown in map3, the meaning of *Land Chenla* and *Pyu* were to connect between Coastal regions



and Mountainous basins or between 2 networks between Maritime Southeast Asia and Inland China. Therefore, after the 9th century when *Tang* Dynasty was confused by the rebellion and inland Chinese Markets were closed, outward looking dry zone also lost their role in inland network. *Pyu* and *Dvaravati* disappeared in the history of China, Angkor had no relation with China since the 9th century.

Under the depression of world trade, their developed urban population and limited agricultural resources should Dry zone city states should change themselves into inward-looking structure. *Pyu*, *Dvaravati* and *Java* failed to transform in the period, but only *Khmer* built the inward-looking states. After *Jayavarman* the 2nd, *Khmer* built so many magnificent pyramid temples in *Roluos* and *Yasodharapura* namely old Angkor and so many moated villages were constructed in Northeast Thailand though they did not try to send their mission to China and had little relation with Indian states also. They succeeded to mobilize the *Savanna* surplus labor to erect gigantic monuments in centers through systemized land route network for administration not trade. Well-developed irrigation system near centers like Indratataka supplied enough food for laborers in *Angkor*. Maybe Iron-salt making villages in Northeast Thailand developed to support self-supplying and close system of Angkor 'empire'.

In that stage, Dry zone civilization borrowed from India transform into something cultural such as *Shiva-Vishnu* complex (*Harihara* belief) *Hindu-Mahayana* complex in *Khmer*, *Shiva-Buddhism* in *Java* and *Theravada* Buddhism in Burma all of which developed independently from contemporary Indian religious movement.

The Last Stage of Dry Zone cities as outward looking centers It was the 11th century that World trade developed again under the Chinese markets' revival in *Sung* Dynasty and *Mediterranean* Markets opening after *Crusade War*. In the early 11th century *Kediri* in Java sent a mission after interval of 200 years, then early 12th century *Khmer* and *Lopburi* participated Chinese trade. The development of *Airlanga* and his successors like *Kediri Singosari*, *Suryavarman's Angkor* was the result of the revival of trade world. probably *Pagan* would connect to this stream.

The reign of *Jayavarman* the 7th in the early 13th century was the golden stage of the outward-looking Dry zone. According to several Chinese sources in the 12 and 13th centuries, *Chenla* was regarded as the richest state in Southeast Asia by Chinese in trade stage.. Agricultural development especially on irrigation systems also developed in *Pagan* such as *Kyause*, *Khmer* such as East and West *Barays* and *Java* such as *Brantas* weir systems. Outward looking states base on the stable agriculture appeared in Southeast Asia in the period.

Water network and fall of dry zone civilization But it should be the last stage of Dry zone in history of Southeast Asia. Because, network system itself in the period could never be changed from the ancient period before the 10th century. The world commodities in the period changed from light luxurious goods to heavy mass consumption like metal, ceramics for importing and pepper, *Brazil wood* for exporting based on the development of *Junk* trade. New trade structure requested the change of transportation network from land route to water course. From the 13th century, Thai states namely the *muang* rose up along the main streams in Southeast Asia such as the *Salween*, the *Chaophraya*, the *Mekong*, the *Da* and the *Hong Ha* (the *Red River*) which showed importance of river route for international trade between mountainous and maritime regions directly. The development of river route decreased trans-dry zone network. The increase of importing out-world goods such as Metal from *China* and Salt from *Archipelago* destroyed inland manufacture. The polity of *Jayavarman's Khmer* should be regarded as a loyal monopoly by concentrating forest goods like *eaglewood* from mountainous regions in *Annam* Mountains and North *Malay Peninsula* to *Angkor* by military and religious power against commercial network in the period. When military power to maintain the network became weak, Cities in dry zone lost their meaning to be built. The late 13th century should be regarded as the time of last stage of the Dry zone as the outward looking regions.

Since the early 15th century, the age of Commerce in South east Asia denied the meaning of Dry zone states because maritime port states' hegemony expanded their network to inland such as *Ayuthaya* polity. At the same time, exporting padi agriculture started in the Deltas in Southeast Asia such as *Pegu* and *Ayuthaya* to respond the rapid development of port polities in the Strait.

Thus, Cities in Dry zone lost meaning as stations , so did not need to import civilization from outside as a symbol then disappeared from history. But history of peasant or cultural history of Dry Zone started from this stage.

In conclusion, We can divide history of Dry Zones in Southeast Asia into two stages, firstly, the stage of imported civilization in periperial cities in Southeast Asia and secondly, the stage of local genuine culture in core heart land of Southeast Asia.

